

Online Training for Tutorial and Mentoring Services: Developing Self-Paced Web-Based Training for Student Tutors at the University of Hawai‘i Maui College

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Abstract: Web-based training is fast replacing face-to-face training because an online training module can be distributed across an entire organization to increase worker skills without requiring individual sessions or costly scheduling. At the Learning Center at the University of Hawai‘i Maui College, low attendance to training sessions impedes tutor productivity, and consequently lowers the quality of student support. Therefore, the purpose of this instructional design project was to develop an effective and self-paced web-based instruction to train student assistants on tutoring and mentoring skills. The 1.5-hour module was created through the Canvas learning management system, as well as web and video editing software, and Web 2.0 technologies—Wordpress and YouTube. To facilitate learner comprehension embedded quizzes or ‘Skills Checks’ were required to test their knowledge before allowing participants to continue on to subsequent sections. To increase learning engagement without a live trainer, such features were included: community-building discussions, animated diagrams, and video-based instructor introductions and tutorial scenarios. In the pre-module survey, participants specified that web-based training sessions could replace face-to-face training only if engagement would be comparable. The results of the post-module survey indicate that well-designed and engaging web-based training could supplement but not replace face-to-face training.

Introduction

The Learning Center (TLC) at the University of Hawai‘i Maui College (UHMC) provides college students with face-to-face tutoring sessions. To staff the tutorial services, students are recruited through recommendations from a full-time faculty members, certifying the student’s expertise in a specific content area. For these student assistants, training is prescheduled once every other week on Friday mornings. The training sessions range in content areas such as tutoring in English composition writing to Mathematics tutoring and interpersonal communication skills.

When creating worker schedules, the TLC coordinator tries to accommodate the student’s availability. However, many students have part-time jobs, or classes and study time scheduled during the weekly training sessions. For those who miss live training sessions,

TLC supervisors try to meet with the student assistant to cover the training content, but many of these one-on-one sessions lack the original engagement of a face-to-face session and requires the student assistant to read a handout. As student assistants miss more and more training, worker performance decreases. In turn poor worker performance means the college students suffer from low-quality tutorial services. The need for an innovative and self-paced form of training was highly desired. The purpose of this instructional design project was to develop a self-paced online instructional module to train new and existing student assistants of The Learning Center (TLC) at the University of Hawaii Maui College (UHMC) on tutoring and mentoring skills.

Background

Web-based training sessions are a valid alternative to face-to-face training. However, face-to-face training require student tutors to travel to the main campus, and some students may feel the cost to travel for just a single hour may be too high and outweigh the benefits of the training session (Jung, 2005). Yet, Reedy contends that while tutors are considered experts in their field such as English or Math, training sessions are required so the tutors can efficiently teach their expertise to others (as cited in Agee & Hodges, 2012).

In order to produce quality web-based training modules, online training should incorporate video-based scenarios because learners use modeled behavioral responses to facilitate learning of key concepts (Chamberlain & Taylor, 2011; Doo, 2006). The development of online training can help to support student tutors who need flexible and convenient training in order to build workplace skills and promote workplace satisfaction (Chamberlain & Taylor, 2011). In addition, a public university such as UHMC should meet accessibility requirements as dictated by universal design for learning standards. Safar (2012) argues that access to online training can be relevant to all types of learners where multiple learning abilities are supported.

Furthermore, web-based trainings are scalable economically and can accommodate training needs for geographically diverse employees (Setaro, 2002). TLC is the hub for tutorial services for UHMC. With the many Education Centers through out Maui County, promoting web-based professional development allows further development of educational capital through providing quality student support for rural areas of Maui County.

Methodology

The *Online Training for Tutoring and Mentoring Skills* instructional design project introduces participants to nationally recognized tutoring standards. The module focuses on teaching participants about the "Tutoring Cycle." The "Tutoring Cycle" is a peer tutoring process that promotes independent learning (MacDonald, 1994). In addition, the "Tutoring Cycle" adheres to the College Reading and Learning Association (CRLA) "Level One Certification for Tutor Training" ("Certification Requirements").

Instructional strategies

At the end of the module, participants should be able to do the following: describe the tutoring cycle's components, analyze a video tutoring scenario by identifying key components of the tutoring cycle, and to differentiate between the roles of a tutor and a tutee. Prerequisite skills in tutoring or mentoring skills were not required. The module content included a combination of embedded web-based videos on tutoring techniques, textual content on tutoring theories, embedded tests, and multiple-choice based assessments.

Instructional Module Outline

- Module 1: Introduction to Tutoring
 - Section Outline: Introduction to Tutoring
 - What is Tutoring
 - Promoting Independent Learning
 - Tutee Roles
 - Tutor Roles
 - What a Tutor Should Do?
 - What a Tutor Shouldn't Do?
 - Discussion 1: What Would You Do?
- Module 2: The Tutoring Cycle
 - Section Outline: The Tutoring Cycle
 - What is the Tutoring Cycle?
 - Skills Check 1
 - Stage 1: Beginning a Session
 - Greeting Your Tutee
 - Setting an Agenda
 - Skills Check 2
 - Stage 2: The Tutoring Cycle
 - Skills Check 3
 - Stage 3: Ending the Session
 - Tutoring Scenario: Rob Meets Sara for Tutoring
 - Skills Check 4
 - Tutoring the Right Way
 - Discussion 2: What Did Sara Do Right?
- Module 3: Conclusion
 - Section Outline: Conclusion
 - Tutoring Cycle Final Quiz
 - Post-Training Participant Survey

Before participants began the instructional module, they were asked to complete a pre-module survey to identify pre-existing skills, knowledge, and preferences towards web-based training. After completing the pre-module survey, they began the instructional module.

The module was separated into three sections. The first section discussed the roles and responsibilities of tutoring followed by a required discussion for participants to apply their learned knowledge. The second section provided an overview of MacDonald's

“Tutoring Cycle” (1994) with each step in the cycle described then followed by a skills check quiz. The last part of module two asked the participants to view a video-based mock tutoring session and to take a quiz to identify key areas that the tutor in the scenario had neglected to cover based on the tutoring cycle. After the quiz was completed, the participants viewed a second video with the same actors, and in the video the tutor used appropriate techniques as prescribed by the tutoring cycle. The last module quizzed the participants on their global understanding of tutoring based on the instructional content. After completing the third module, the participants completed a post-module survey to evaluate their learning experience throughout the module.

Content for module one was developed from tutoring and mentoring techniques in the CRLA’s Handbook for Training Peer Tutors and Mentors (Agee & Hodges, 2012) and content from module two was developed from The Master Tutor (MacDonald, 1994). The instructional design was modeled on Gagne’s “Nine Events of Learning (2005).” Special attention was given to engaging the participants through clearly stated objectives, and questioning participants about their existing knowledge on the topic of tutoring. Embedded quizzes asked participants to apply the content to analyze a negative tutoring scenario in comparison with a positive tutoring scenario, essay questions that required a facilitator’s feedback for final grading, and enhancing retention and transfer by a final module quiz with essay questions.

Technologies

Recruitment was conducted through a WordPress page with a web-based consent form for participants to enroll in the project (see Figure 1). The instructional module (see Figure 2) was created and hosted on the free open-source learning management system, Canvas by the company Instructure. Free accounts for teachers allow up to 250 MB of online content storage for each course.

Participants signed up for the course on their own by entering an access code that was sent to their emails after they completed the web-based Consent Form for Participation. Canvas modules feature embedded quizzes or “skills checks” that participants were required to complete before continuing on to subsequent sections. The course was accessible through the following url: <<https://canvas.instructure.com/courses/774580>>.



Figure 1. Recruitment page that was sent to all participants. Enrollment was conducted through the WordPress page, hosted through my own personal domain <<http://www.kealiiballao.com/project/etec>>



Figure 2. Instructional module home page, showing the instructor introduction video, course objectives and the course outline.

Embedded animated diagrams were created the by open-source software GIMP (see Figure 3). Video recordings were embedded from YouTube users with permission from the creators (see Figure 4). The videos did not have captions embedded on them, so in order to support diverse learners and keep the modules accessible, captions were added by the use of CaptionTube, a free web-tool that allows captions to be overlaid using YouTube's captioning feature without altering the video itself.

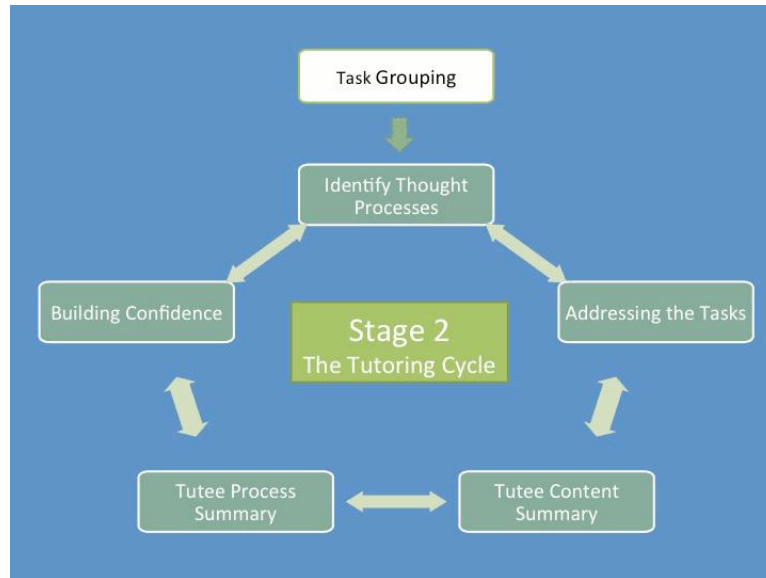


Figure 3. Tutoring cycle animation based on The Master Tutor by MacDonald (1994). The diagram only shows stage two of the MacDonald's tutoring cycle.

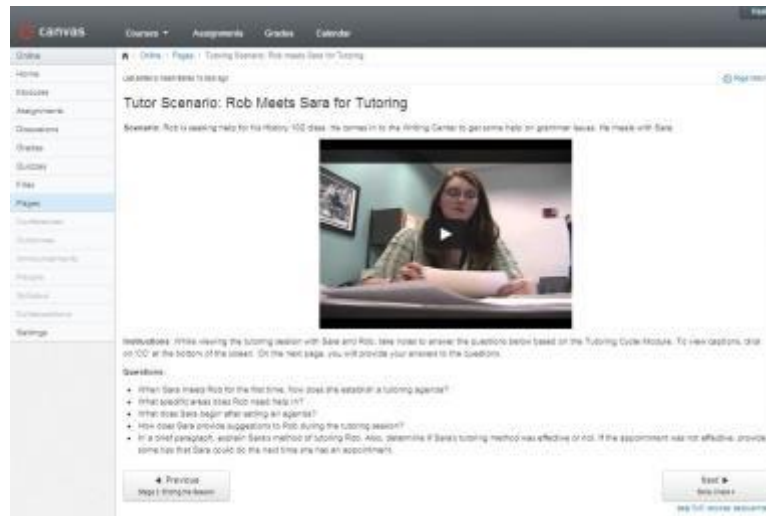


Figure 4. Mock tutoring scenario that participants viewed after learning about the tutoring cycle content. The goal of the video was to analyze which parts of the tutoring cycle the tutor, Sara, neglected to follow.

The instructor introduction video was recorded with a HD digital camcorder, and the video was edited using iMovie. The audio recorded from the camcorder's built in microphone picked up too much static and the volume fluctuated, so the audio was recorded separately using a voice recorder and combined with the video in iMovie because the camcorder did not have an microphone input.

Participants

Recruitment ran from February 1, 2013 to March 14, 2013, with an extended project conclusion on March 20, 2013. An initial recruitment through emails sent via Laulima course management system produced only two participants. A second recruitment through personal communication with student assistants, UHMC faculty members, and Facebook messages produced 12 additional participants.

The instructional module was designed for student tutors at TLC; however the recruited participants ranged from various educational and professional backgrounds, and a wide age range. Among these participants, 12 were affiliated with UHMC, and four participants were from other organizations. Out of the 12 affiliated UHMC participants, eight were students. Sixty-four percent (nine participants out of 14) of the total participants worked or had experience in educational teaching or tutorial services, while 36% (five participants out of 14) did not. For participants who worked in education before, the average years of experience was five years with two participants with one year of experience and two participants with 12 years of experience. Participant ages ranged from 18-59 years old. With regards to online learning experience, 12 out of 14 participants had taken some form of online course. Seven participants had taken two to four courses per year, and one participant had taken at least four courses per year online. For two participants, the instructional module was their first experience with online learning.

Data Collection

In total, 14 participants completed the 24-question mixed-measure quantitative and qualitative pre-module survey, 11 participants completed all exercises in the instructional module, and 11 participants completed the 41-question mixed-measure quantitative and qualitative post-module survey. Additional data collection was provided through Canvas' course analytics tool, which examined student engagement with the module content, and course grades on the four embedded module quizzes and the final module quiz.

Results

Pre-Module Survey

In the pre-module survey, participants were generally in favor of online learning. Mainly, participants desired their online-learning experience to be accessible at different times and locations, to accommodate varying schedules and lifestyles, and to be self-paced. When questioned about their negative perception of online learning, most said they disliked inaccessible teachers who do not effectively communicate to their students. Additionally, some participants stated that lack of face-to-face interaction could be a deterrent to enrolling in an online class. Some participants wanted technology tools like Skype communication or live chats that could be easily implemented, but the most desired features focused on teaching engagement and instructional design.

To assess participants' perceptions of online learning, participants were asked to rate their level of agreement to a series of statements on a six-point Likert scale: 0 - No Opinion 1 - Strongly Disagree 2 - Moderately Disagree 3 - Neutral, 4 - Moderately Agree, 5 - Strongly Agree. Seventy-one percent of the participants found online learning as an effective way to learn with three participants stating they moderately agree and seven participants stating they strongly agree. For the an online course to be engaging key features such as graphics, multimedia, and problem solving are highly motivating.

When I created the online module included specific instructional features and instructional design techniques: untimed quizzes with multiple retake opportunities, animated graphics and video scenarios, in-depth tutorial content, and embedded analysis questions. To gauge the importance of such features, participants were asked to rate each feature on a five-point Likert scale: 0 - No Opinion 1 - Not Important 2 - Slightly Important 3 - Moderately Important 4 - Very Important. Twenty-three percent of the participants felt that allowing self-paced and unrestricted access to the modules was important, while 46% stated they were neutral to the idea of self-paced learning The participants wanted opportunities to learn in multiple sessions rather than a single session. According to the participants, graphics and animations are are key features.

Post-Module Survey

According to the post-module survey, seven participants stated that they completed the module in one to two hours, while three participants stated that they completed the module in two to three hours. According to the post-module survey, eight participants stated that they completed the module in one to two sessions, whereas five completed the module in more than two sessions.

Participants where also asked to describe their level of engagement with the module based on a five-point Likert scale: 0 – Not applicable, 1 – less engaged, 2 –more engaged, and 3 – more engaged, and 4 – most engaged. The participants found that their interest in the topic of tutoring and mentoring skills increases as they progressed through the module. Subsequent modules would be activated only after completing the previous modules. As the participants learned new content, they began to antcipant answers to the questions and solutions, and they actively participated in getting the right answers by viewing previous content pages. Fifty-four percent of the participants made a significant effort to complete the exercises and quizzes, whereas 46% made some effort to complete the exercises. None of the participants found the module boring or uninteresting. Ninety-two percent of the participants felt that the content was most engaging, and 8% more engaging.

A large part of this project was to determine if a self-paced web-based training module would be a valid replacement for face-to-face trainings. Sixty-four percent of participants had no preference of web-based trainings over face-to-face training; only one participant stated the web-based training was preferable over face-to-face trainings. When asked if they prefer face-to-face trainings to web-based trainings, 45% of the participants were also neutral to the idea, while most respondents agreed that face-to-face

training was preferable to web-based training. Only 1% did not prefer face-to-face training to web-based training.

Qualitative open-ended comments about the module content revealed that the videos were highly engaging and very useful for learning the content. One participant commented that they liked the different scenarios because it allowed the learner to contrast between effective and ineffective tutoring techniques. Another participant stated that the videos were a good reinforcement for the content, whereas another participant stated that videos helped to see the training concepts in action, and it made the module less 'stiff' and more interesting. However, one participant wanted additional videos that modeled each step of the tutoring cycle rather than a single video-tutoring scenario.

Participants responses to the question: Which content or features of the module were most interesting or engaging for you?

I like the tutoring cycle because it actually lays out the whole process a tutor goes through to provide quality help. And sometimes we forget that we go through this whole cycle when we help out a tutee.

I liked the intro.

The videos helped with the reading.

I enjoyed the videos. The ability to re-play them for in depth review was beneficial to my learning. Having the learning material in one place where I could go back and look at it if I needed clarification or to review was helpful and convenient.

I found the tutoring videos most effective in showing a negative tutoring attempt versus a positive tutoring attempt.

I like the different scenarios. It allowed me to be able to see the training concepts in action. The combination of video, text and tests was great. It breaks the monotony and kept me interested. I like have the content first, and then the video to reinforce the learning.

Good use of videos to show examples of a positive tutoring session.

I enjoyed the videos. I think as tutors, we can all relate to both the good and bad scenarios depicted.

I also find videos to be a lot more captivating than text alone. The animated flowcharts demonstrating the tutoring cycle were also easy to follow.

I like the variety. There were videos, diagrams and short text modules; this kept it interesting

In contrast, some participants felt that each module section had too much content on a single page, and that breaking up the module in sections would make learning more effective. Some participants found clicking through multiple pages to find content a distraction. Also, the animated chart that highlighted each step of the tutoring cycle was seen as a distraction. To improve the module, participants suggested additional videos to cover other aspects of tutoring. One suggestion was to include an interactive game where participants would follow through a tutoring narrative with hyperlinked questions, which when clicked learners would be prompted if their responses were correct or not, eventually guiding the learner towards learning effective tutoring techniques.

Participant responses to the question: Which content or features of the module were least interesting or engaging for you?

I would of like to see a few more example on different methods to make the student feel comfortable when coming in to an appointment.

I feel the information contained within the modules could have been divided in a more effective manner. It was like eating a steak whole sometimes. I think that more pages within a module would help me to remember more and make information more easily accessible. I found myself clicking through pages several times before finding what I was looking for. Some of the text was too long to read.

Some of the written portions, while important were kind of boring. I found that I needed to read them several time before the I understood the concepts.

I don't being tested, but if I wasn't tested I might not have taken it as seriously.

Too much text to read. The sections of the module that were strictly text based were less engaging.

I found the flashing graphic re: the Tutoring Process distracting.

All of the participants self-reported that they would recommend the module for a colleague and some wanted to see the module be fully developed for training purposes. Some felt that the course was a concise way to enrich a tutor's skills as a supplement to face-to-face training.

Module Quizzes

Participants completed the modules with final grades ranging from 88.4% to 100%. Participation was not graded and the final percentage was based on only the four quizzes and the final module quiz. Three participants scored 100% on all quizzes, five participants scored 98%, one participant scored 97%, three participants scored 96% and two participants scored less than 90%. Taking into consideration the module length, the multitude of quizzes, in comparison to the high scores, the design of the module was shown to be effective in teaching tutoring and mentoring skills.

Discussion

Tutoring and mentoring are interpersonal skills that may be difficult to teach with an online module. By including videos, such as the instructor introduction and the video mock tutoring scenarios, participants were able to connect textual content to real-world examples. However, as stated in the post-survey, the participants expected more videos to reinforce learning on the pages with only textual content.

As stated in the pre-survey, the participants wanted an engaging experience. Reducing the amount of textual content and providing more videos would have made the module more engaging. Though the module proved to be an effective means of professional development, changes to the content would be warranted based on post-module feedback. Too much content on a single page was deemed overwhelming. Separating the content into smaller sub-modules with related video examples could increase user engagement while allowing additional content to reinforce key features of the tutoring cycle.

Participants valued the module for its content and its learning goal and were invested in comprehending the material. Though the module was expected to take one to two hours, which most participants did state as their time spent, expanding the individual content areas within the tutoring cycle while maintaining the current level of engagement could make the module longer. In contrast, a longer module may not be a deterrent to participants if the content areas are designed to be engaging by including additional videos, effective graphics, and concise textual content.

Conclusion

Based on the results of the instructional design evaluation, a web-based training on tutoring and mentoring skills would be effective with textual content that was supplemented with video examples to reinforce each concept of the tutoring cycle. Most participants found the videos to be the best feature of the module, while the long textual content was found to be less effective and less engaging. Because employees in face-to-face training sessions are accustomed to a high level of engagement, incorporating recorded examples of actual tutoring sessions would provide the same type of engagement from a face-to-face training session. In face-to-face trainings, the role-play is a technique to reinforce interpersonal communication skills. Having the participants compare and contrast two dissimilar scenarios would be a supplement for the role-playing should the trainings be converted to a 100% online format. In designing a future module, having real tutoring sessions recorded for analysis may help to teach employees at the UHMC-TLC about the ideal tutoring session and its required components. Furthermore, many employees of the UHMC-TLC have taken online courses so they are accustomed to self-paced study. If web-based training is implemented with content that is not motivating or relevant, the learning of the content will be adversely affected.

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